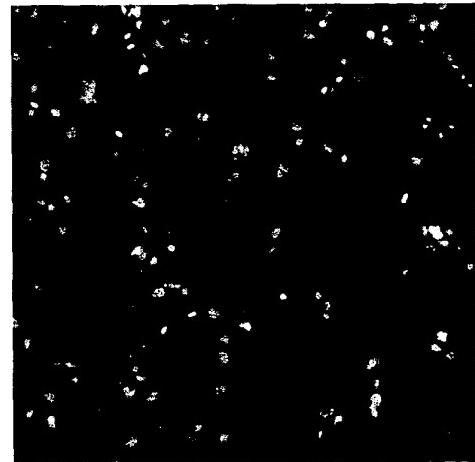
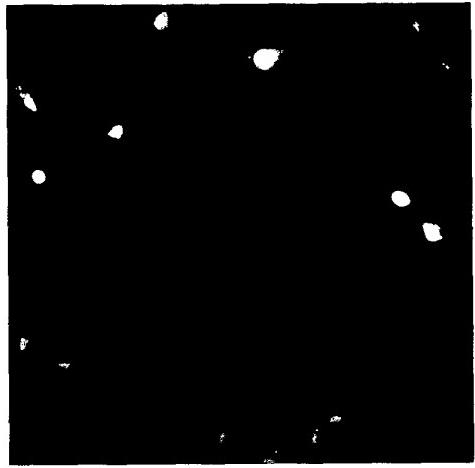


W E S T C O M M U N I C A T I O N S

Figure 1



Hoechst 33342 Stain



Green Fluorescent Protein

Figure 2

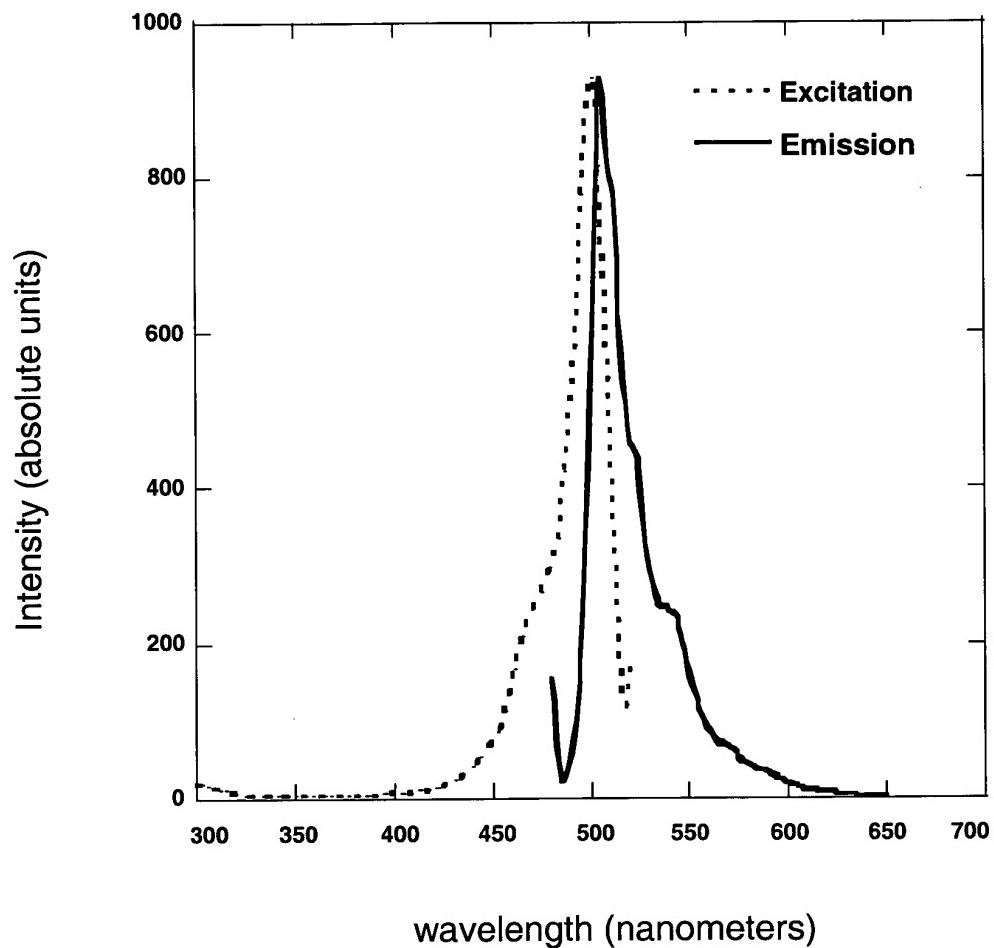
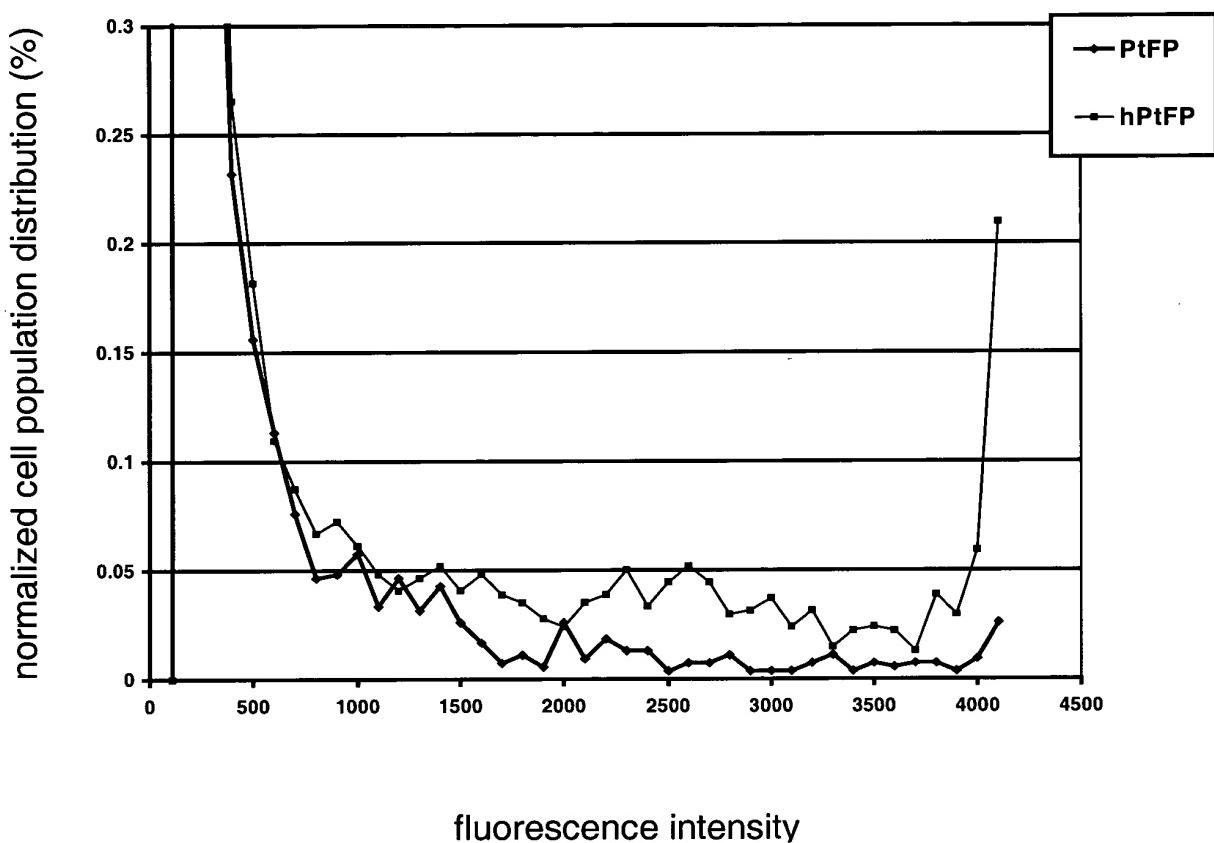
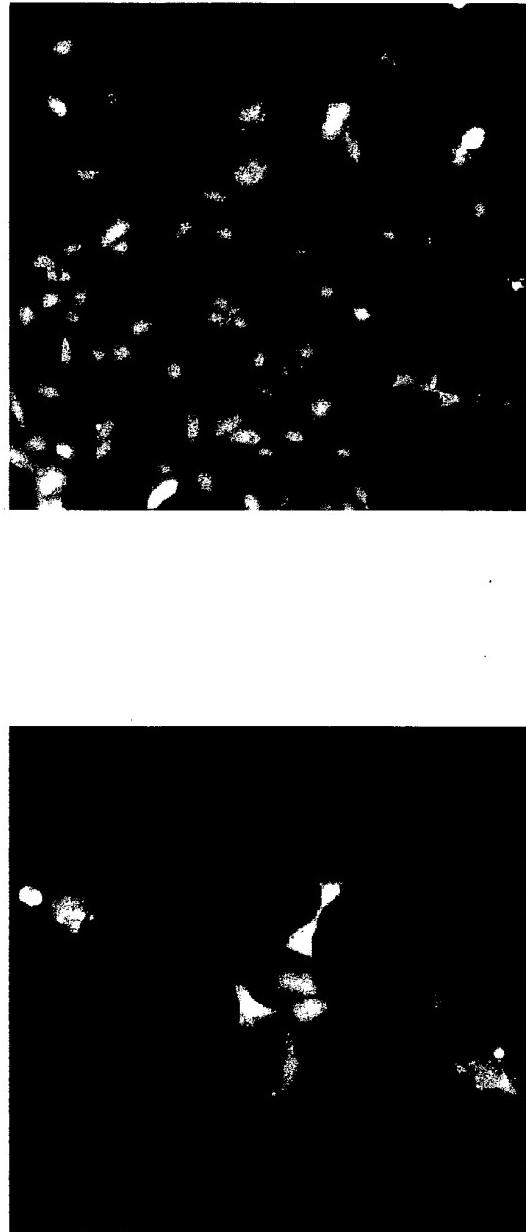


Figure 3



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Figure 4



A549 cells

HEK 293 cells

Figure 5

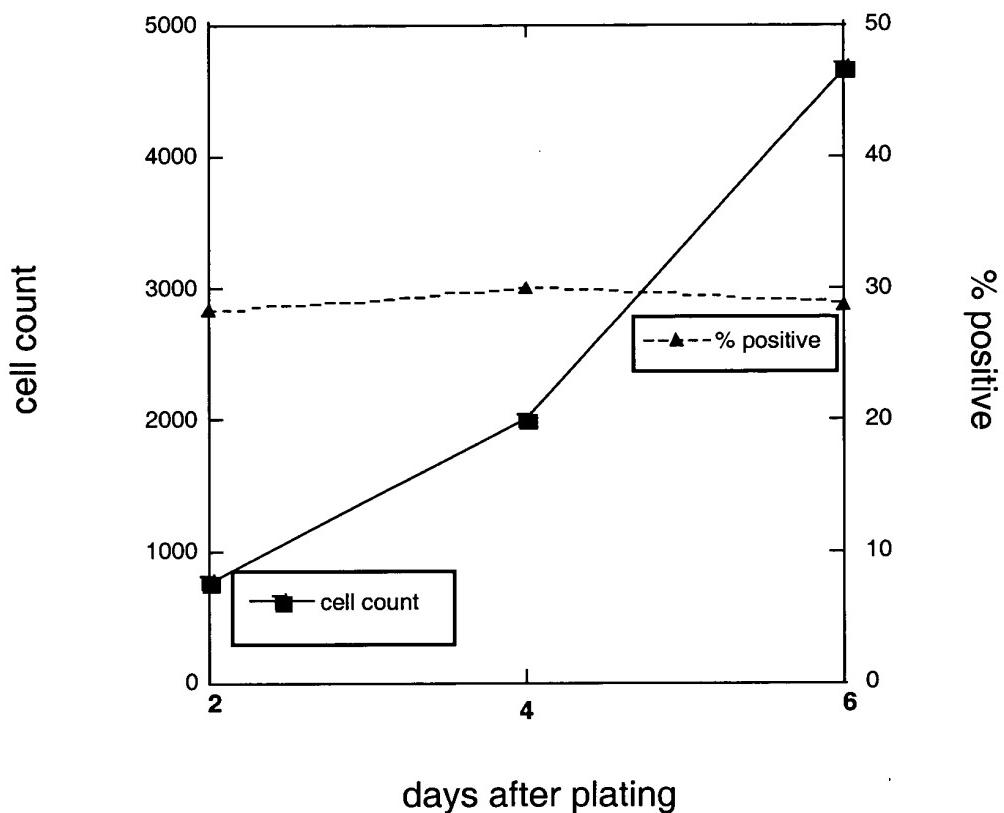
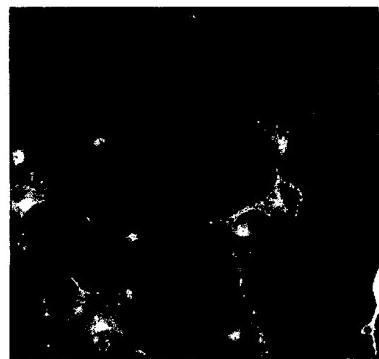
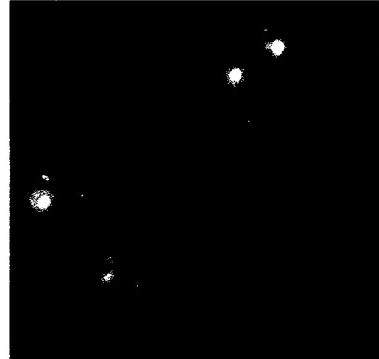


Figure 6

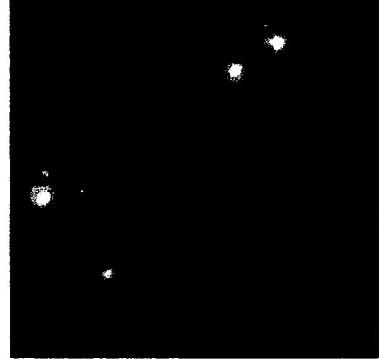
A



B



C



4000 3000 2000 1000

RRKRQKR - SAG - (DEV/DAG)_{x4} - STMSTVHEILCKLSLEGVHSTPPSA

Figure 7

Caspase-3 biosensor

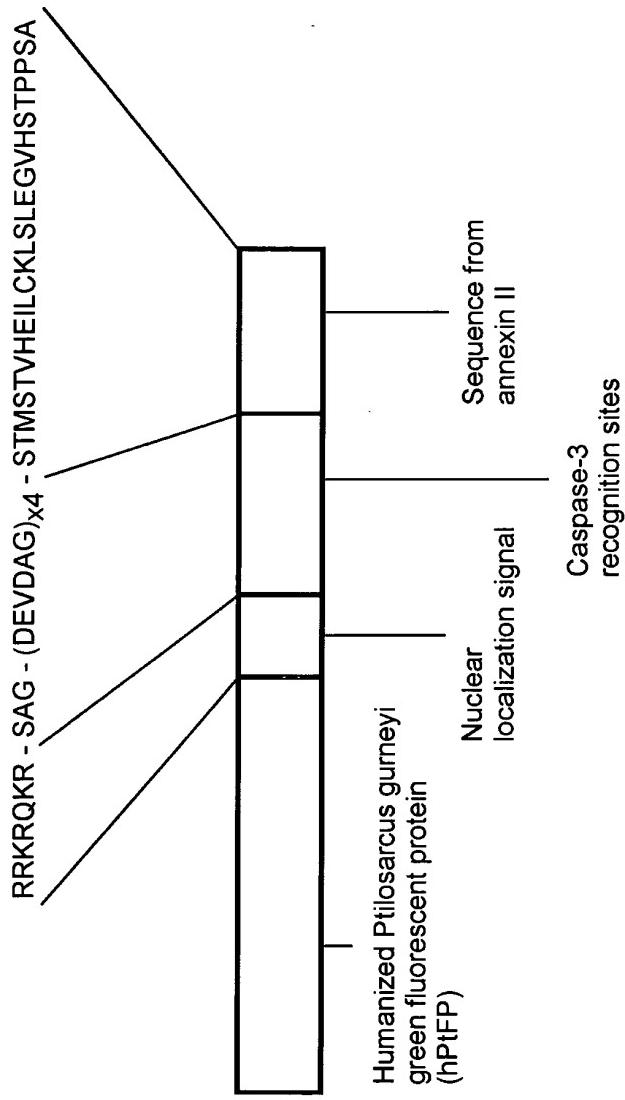


Figure 8

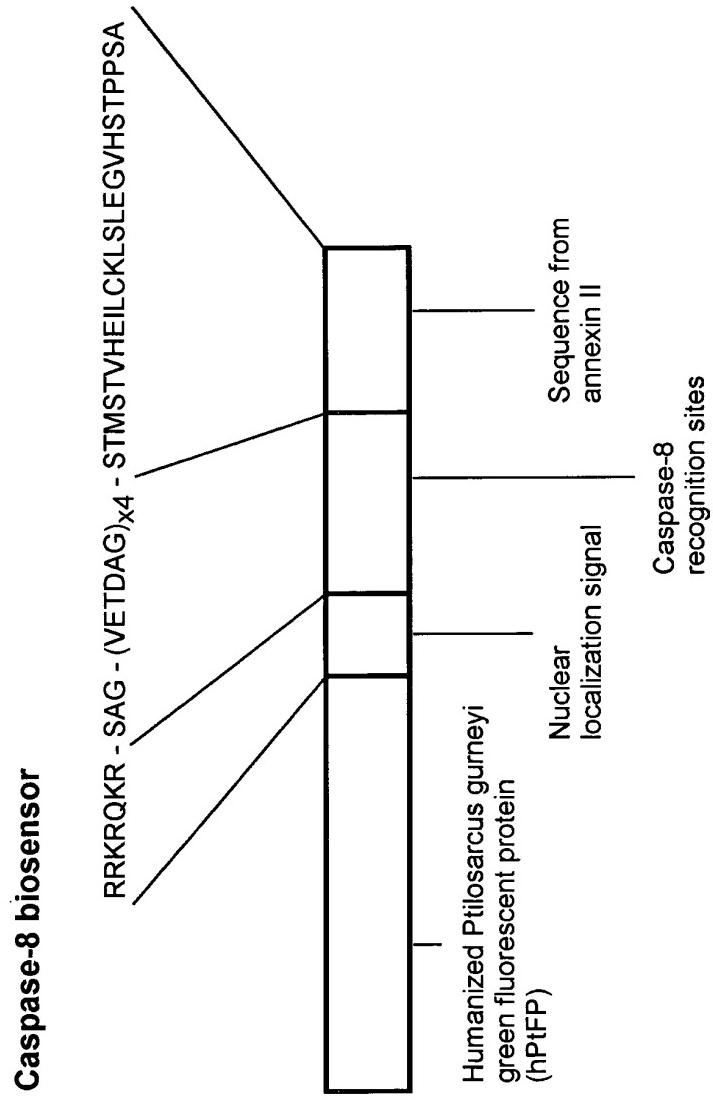


Figure 9

	Met
	Met Val
PtFP	+1 Asn Arg Asn Val Leu Lys Asn Thr Gly Leu Lys Glu Ile Met Ser Ala Lys Ala
	1 ATG AAC CGC AAC GTA TTA AAG AAC ACT GGA CTG AAA GAG ATT ATG TCG GCA AAA GCT
hPtFP	1 ATG GTG AAC CGG AAC GTG CTG AAG AAC ACC GGC CTG AAG GAG ATC ATG AGC GCC AAG GCC
	*** * * * * * * * * * * *** * * * * * *
PtFP	+1 Ser Val Glu Gly Ile Val Asn Asn His Val Phe Ser Met Glu Gly Phe Gly Lys Gly Asn
	61 AGC GTT GAA GGA ATC GTG AAC AAT CAC GTT TTT TCC ATG GAA GGA TTT GGA AAA GGC AAT
hPtFP	61 AGC GTG GAG GGC ATC GTG AAC AAC CAC GTG TTC AGC ATG GAG GGC TTC GGC AAG GGC AAC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Val Leu Phe Gly Asn Gln Leu Met Gln Ile Arg Val Thr Lys Gly Gly Pro Leu Pro Phe
	121 GTA TTA TTT GGA AAC CAA TTG ATG CAA ATC CCG GTT ACA AAG GGA GGT CCG TTG CCA TTC
hPtFP	121 GTG CTG TTC GGC AAC CAG CTG ATG CAG ATC CCG GTG ACC AAG GGC GGC CCT CTG CCC TTC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Ala Phe Asp Ile Val Ser Ile Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
	181 GCT TTC GAT ATT GTT TCC ATA GCT TTC CAA TAC GGG AAT CGC ACT TTC ACG AAA TAC CCA
hPtFP	181 GCC TTC GAC ATC GTG AGC ATC GCC TTC CAG TAC GGC AAC CGG ACC TTC ACC AAG TAT CCC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Asp Asp Ile Ala Asp Tyr Phe Val Gln Ser Phe Pro Ala Gly Phe Phe Tyr Glu Arg Asn
	241 GAC GAC ATT GCG GAC TAC TTT GTT CAA TCA TTC CCG GCT GGA TTT TTC TAC GAA AGA AAT
hPtFP	241 GAC GAC ATC GCC GAC TAC TTC GTG CAG AGC TTC CCT GCC GGC TTC TTC TAC GAG CGG AAC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Leu Arg Phe Glu Asp Gly Ala Ile Val Asp Ile Arg Ser Asp Ile Ser Leu Glu Asp Asp
	301 CTA CGC TTT GAA GAT GGC GCC ATT GTT GAC ATT CGT TCA GAT ATA AGT TTA GAA GAT GAT
hPtFP	301 CTG CGG TTC GAG GAC GGC GCC ATC GTG GAC ATC CGG AGC GAC ATC AGC CTG GAG GAC GAC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Lys Phe His Tyr Lys Val Glu Tyr Arg Gly Asn Gly Phe Pro Ser Asn Gly Pro Val Met
	361 AAG TTC CAC TAC AAA GTG GAG TAT AGA GGC AAC GGT TTC CCT AGT AAC GGA CCC GTG ATG
hPtFP	361 AAG TTC CAC TAC AAG GTG GAG TAC CGC GGC AAC GGC TTC CCT AGC AAC GGC CCT GTG ATG
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Gln Lys Ala Ile Leu Gly Met Glu Pro Ser Phe Glu Val Val Tyr Met Asn Ser Gly Val
	421 CAA AAA GCC ATC CTC GGC ATG GAG CCA TCG TTT GAG GTG GTC TAC ATG AAC AGC GGC GTT
hPtFP	421 CAG AAG GCC ATC CTG GGC ATG GAG CCC AGC TTC GAG GTG GTG TAC ATG AAC AGC AGC GGC GTG
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Leu Val Gly Glu Val Asp Leu Val Tyr Lys Leu Glu Ser Gly Asn Tyr Tyr Ser Cys His
	481 CTG GTG GGC GAA GTA GAT CTC GTT TAC AAA CTC GAG TCA GGG AAC TAT TAC TCG TGC CAC
hPtFP	481 CTG GTG GGC GAG GTG GAC CTG GTG TAC AAG CTG GAG AGC GGC AAC TAC TAC AGC TGC CAC
	* * * * * * * * * * * * * * * * * *** * * ***
PtFP	+1 Met Lys Thr Phe Tyr Arg Ser Lys Gly Gly Val Lys Glu Phe Pro Glu Tyr His Phe Ile
	541 ATG AAA ACG TTT TAC AGA TCC AAA GGT GGA GTG AAA GAA TTC CCG GAA TAT CAC TTT ATC
hPtFP	541 ATG AAG ACC TTC TAC CGG AGC AAG GGC GGC GTG AAG GAG TTC CCT GAG TAC CAC TTC ATC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 His His Arg Leu Glu Lys Thr Tyr Val Glu Glu Gly Ser Phe Val Glu Gln His Glu Thr
	601 CAT CAT CGT CTG GAG AAA ACC TAC GTG GAA GGA AGC TTC GTG GAA CAA CAC GAG ACC
hPtFP	601 CAC CAC CGG CTG GAG AAG ACC TAC GTG GAG GGC AGC TTC GTG GAG CAG CAC GAG ACC
	* * * * * * * * * * * * * * * * * *
PtFP	+1 Ala Ile Ala Gln Leu Thr Thr Ile Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val ***
	661 GCC ATT GCA CAA CTG ACC ACA ATT GGA AAA CCT CTG GGC TCC CTT CAT GAA TGG GTG TAG
hPtFP	661 GCC ATC GCC CAG CTG ACC ACC ATC GGC AAG CCT CTG GGC AGC CTG CAC GAG TGG GTG TAA
	* * * * * * * * * * * * * * * * * *

HindIII

+1 M V N R N V L K N T G
1 AAG CTT GCC ACC ATG GTG AAC CGG AAC GTG CTG AAG AAC ACC GGC
TTC GAA CGG TGG TAC CAC TTG GCC TTG CAC GAC TTC TTG TGG CCG

+1 L K E I M S A K A S V E G I V
46 CTG AAG GAG ATC ATG AGC GCC AAG GCC AGC GTG GAG GGC ATC GTG
GAC TTC CTC TAG TAC TCG CGG TTC CGG TCG CAC CTC CCG TAG CAC

+1 N N H V F S M E G F G K G N V
91 AAC AAC CAC GTG TTC AGC ATG GAG GGC TTC GGC AAG GGC AAC GTG
TTG TTG GTG CAC AAG TCG TAC CTC CCG AAG CCG TTC CCG TTG CAC

+1 L F G N Q L M Q I R V T K G G
136 CTG TTC GGC AAC CAG CTG ATG CAG ATC CGG GTG ACC AAG GGC GGC
GAC AAG CCG TTG GTC GAC TAC GTC TAG GCC CAC TGG TTC CCG CCG

+1 P L P F A F D I V S I A F Q Y
181 CCT CTG CCC TTC GCC TTC GAC ATC GTG AGC ATC GCC TTC CAG TAC
GGA GAC GGG AAG CGG AAG CTG TAG CAC TCG TAG CCG AAG GTC ATG

+1 G N R T F T K Y P D D I A D Y
226 GGC AAC CGG ACC TTC ACC AAG TAT CCC GAC GAC ATC GCC GAC TAC
CCG TTG GCC TGG AAG TGG TTC ATA GGG CTG CTG TAG CGG CTG ATG

+1 F V Q S F P A G F F Y E R N L
271 TTC GTG CAG AGC TTC CCT GCC GGC TTC TAC GAG CGG AAC CTG
AAG CAC GTC TCG AAG GGA CGG CCG AAG AAG ATG CTC GCC TTG GAC

+1 R F E D G A I V D I R S D I S
316 CGG TTC GAG GAC GGC GCC ATC GTG GAC ATC CGG AGC GAC ATC AGC
GCC AAG CTC CTG CCG CGG TAG CAC CTG TAG GCC TCG CTG TAG TCG

+1 L E D D K F H Y K V E Y R G N
361 CTG GAG GAC GAC AAG TTC CAC TAC AAG GTG GAG TAC CGC GGC AAC
GAC CTC CTG CTG TTC AAG GTG ATG TTC CAC CTC ATG GCG CCG TTG

+1 G F P S N G P V M Q K A I L G
406 GGC TTC CCT AGC AAC GGC CCT GTG ATG CAG AAG GCC ATC CTG GGC
CCG AAG GGA TCG TTG CCG GGA CAC TAC GTC TTC CGG TAG GAC CCG

+1 M E P S F E V V Y M N S G V L
451 ATG GAG CCC AGC TTC GAG GTG GTG TAC ATG AAC AGC GGC GTG CTG
TAC CTC GGG TCG AAG CTC CAC CAC ATG TAC TTG TCG CCG CAC GAC

+1 V G E V D L V Y K L E S G N Y
496 GTG GGC GAG GTG GAC CTG GTG TAC AAG CTG GAG AGC GGC AAC TAC
CAC CCG CTC CAC CTG GAC CAC ATG TTC GAC CTC TCG CCG TTG ATG

+1 Y S C H M K T F Y R S K G G V

Figure 10

541 TAC AGC TGC CAC ATG AAG ACC TTC TAC CGG AGC AAG GGC GGC GTG
ATG TCG ACG GTG TAC TTC TGG AAG ATG GCC TCG TTC CCG CCG CAC

+1 K E F P E Y H F I H H R L E K
586 AAG GAG TTC CCT GAG TAC CAC TTC ATC CAC CAC CGG CTG GAG AAG
TTC CTC AAG GGA CTC ATG GTG AAG TAG GTG GTG GCC GAC CTC TTC

+1 T Y V E E G S F V E Q H E T A
631 ACC TAC GTG GAG GAG GGC AGC TTC GTG GAG CAG CAC GAG ACC GCC
TGG ATG CAC CTC CTC CCG TCG AAG CAC CTC GTC GTG CTC TGG CGG

+1 I A Q L T T I G K P L G S L H
676 ATC GCC CAG CTG ACC ACC ATC GGC AAG CCT CTG GGC AGC CTG CAC
TAG CGG GTC GAC TGG TGG TAG CCG TTC GGA GAC CCG TCG GAC GTG

Not I

+1 E W V *
721 GAG TGG GTG TAA AGC GGC CGC
CTC ACC CAC ATT TCG CCG GCG

Figure 10 (continued)

The coding sequence (from start codon to stop codon):

atggtaaccggaacgtgctgaagaacacccggcctgaaggagatcatgagcgccaag
gccagcgtggagggcatcgtaacaaccacgtgttcagcatggagggcttcggcaag
ggcaacgtgcttgcggcaaccagctgatgcagatccgggtgaccaagggcgccct
ctgccccttcgccttcgacatcgtagcatcgccctccagtacggcaaccgaccc
accaagtatcccgacgacatcgccgactacttcgtgcagagcttccctgcggcttc
ttctacgagcggAACCTCGGTTcgaggacggccatcgtagcatccggagcgac
atcagcctggaggacgacaagttccactacaagggtggagtaccgcggcaacggcttc
cctagcaacggccctgtgatgcagaaggccatcctggcatggagccagcttcgag
gtggtgtacatgaacagcggcgtgctggggcgagggtggacctgggttacaagctg
gagagcggcaactactacagctgccacatgaagacccatcctaccggagcaagggcgcc
gtgaaggagttccctgagtaccacttcatccaccaccggctggagaagacactacgtg
gaggaggccagcttcgtggagcagcacgagaccggccatcgcccaagctgaccaccatc
aaaaaaacctctaaaaaqaqcctqcacgagtgggtgtaa

Figure 11

0
1
2
3
4
5
6
7
8
9

aagcttgcaccatggtaaccgaaacgtgctgaagaacaccggcctgaaggagatc
atgagcgccaaggccagcgtggaggcatcgtaacaaccacgtgttcagcatggag
ggcttcggcaaggcaacgtgctgttcggcaaccagctgtcgatgcagatccgggtgacc
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atccggagcgacatcagcctggaggacgacaagtccactacaagggtggagtaccgc
ggcaacggcttccctagcaacggccctgtgatgcagaaggccatcctggcatggag
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Figure 12

Figure 13

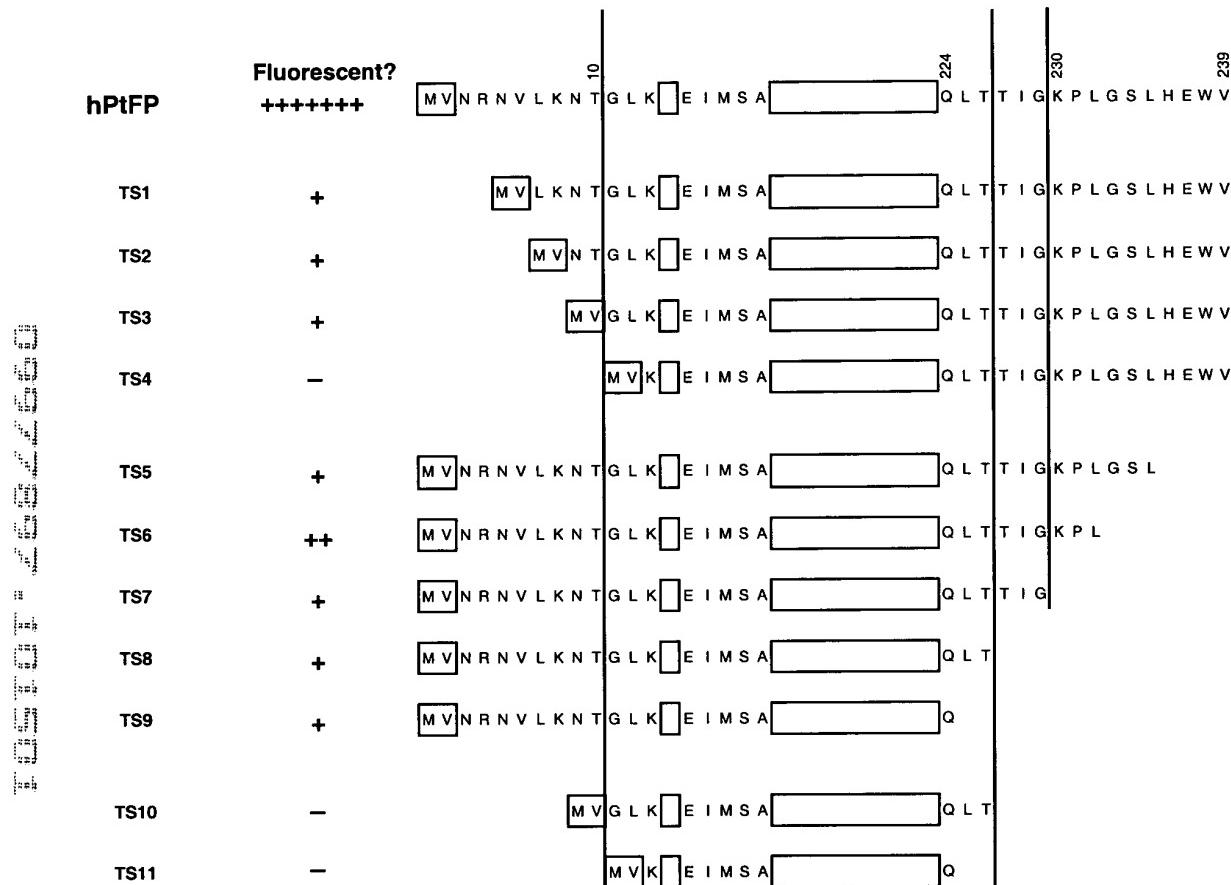
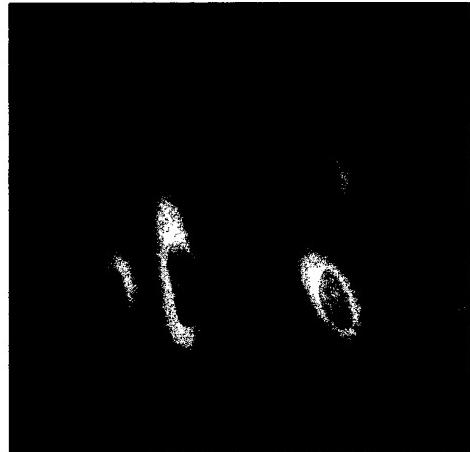
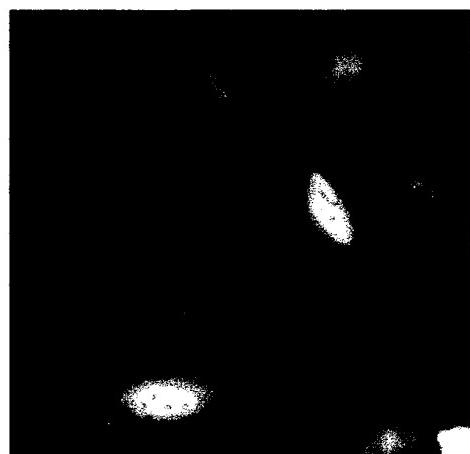


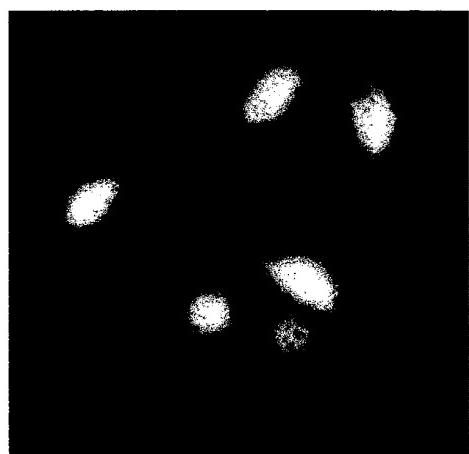
Figure 14



no treatment



**Staurosporine
10 nM 6 hours**

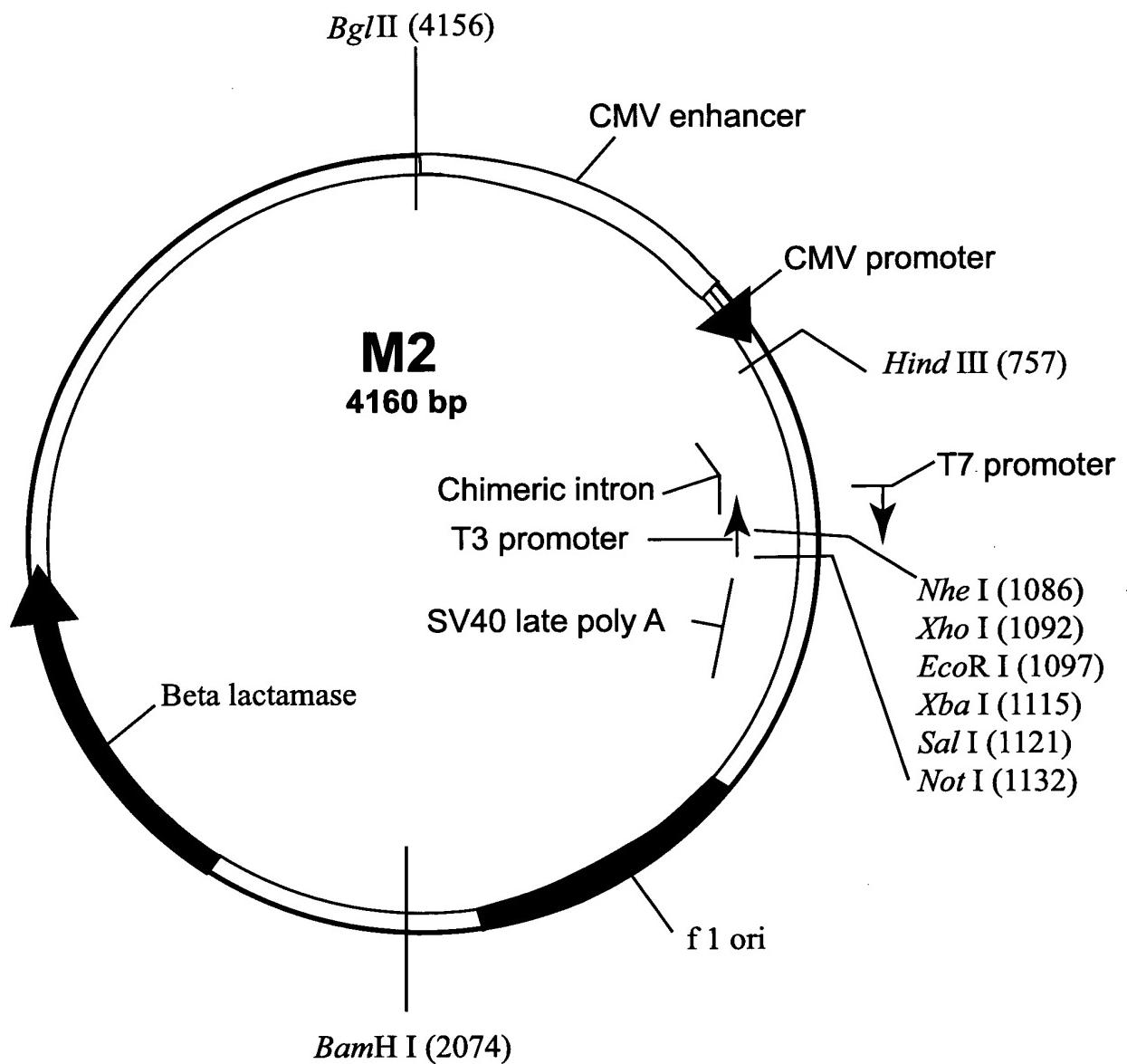
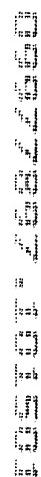


**Staurosporine
1 nM 24 hours**

UUU F 0.45 (185619)	UCU S 0.18 (161556)	UAU Y 0.43 (133427)	UGU C 0.45 (108740)
UUC F 0.55 (225633)	UCC S 0.22 (192616)	UAC Y 0.57 (174805)	UGC C 0.55 (134523)
UUA L 0.07 (79303)	UCA S 0.15 (128429)	UAA * 0.29 (8187)	UGA * 0.50 (14381)
UUG L 0.13 (135218)	UCG S 0.06 (49456)	UAG * 0.21 (5913)	UGG W 1.00 (142435)
CUU L 0.13 (139009)	CCU P 0.28 (189374)	CAU H 0.41 (113684)	CGU R 0.08 (51100)
CUC L 0.20 (210903)	CCC P 0.33 (219428)	CAC H 0.59 (162826)	CGC R 0.19 (118404)
CUA L 0.07 (75667)	CCA P 0.27 (182506)	CAA Q 0.26 (130857)	CGA R 0.11 (68664)
CUG L 0.40 (435317)	CCG P 0.11 (76684)	CAG Q 0.74 (377006)	CGG R 0.21 (126679)
AUU I 0.35 (174021)	ACU T 0.24 (140780)	AAU N 0.46 (186915)	AGU S 0.15 (131222)
AUC I 0.49 (240138)	ACC T 0.36 (213626)	AAC N 0.54 (218376)	AGC S 0.24 (211962)
AUA I 0.16 (78463)	ACA T 0.28 (162837)	AAA K 0.42 (262630)	AGA R 0.20 (125600)
AUG M 1.00 (244236)	ACG T 0.12 (69346)	AAG K 0.58 (359627)	AGG R 0.20 (123646)
GUU V 0.18 (119013)	GCU A 0.26 (202329)	GAU D 0.46 (245435)	GGU G 0.16 (118798)
GUC V 0.24 (160764)	GCC A 0.40 (310626)	GAC D 0.54 (287040)	GGC G 0.34 (250410)
GUA V 0.11 (76398)	GCA A 0.23 (173010)	GAA E 0.42 (317703)	GGA G 0.25 (180955)
GUG V 0.47 (317359)	GCG A 0.11 (82647)	GAG E 0.58 (441298)	GGG G 0.25 (180001)

Figure 15

Figure 16



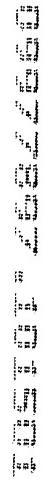
卷之三

Figure 17

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tactcaccagtacacagaaaagcatcttacggatggcatgacagtaagagaattatgcag
tgctgccataaccatgagtgataacactgcggcaacttacttctgacaacgatcgag
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tcggcccttcggctggctggttattgctgataaatctggagccggtgagcgtggtc
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TTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATAACCAAAACTGTTCTTAGTGTAG
CGTAGTTAGGCCACCCTCAAGAACTCTGTAGCACCGCCTACACCTCGCTCGT
AACTCTGTTACCACTGGCTGCGCAGTGGCGATAAGTCGTGCTTACGGGTTGGACT
CAAGACGATAGTTACCGGATAAGGCAGCGGTGGCTGAACGGGGGGTCGTGACA
CAGCCCGCTGGAGCGAACGACCTACACCGAACTGAGATAACCTACAGCGTAGCTATG
AGAAAGCGCCACGCTTCCCAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGG
TCGGAACAGGAGAGCGCACGGAGCTTCCAGGGGAAACGCCTGGTATCTTATAGT
CCTGTCGGGTTCGCCACCTCTGACTTGAGCGTCGATTTGTGATGCTCGTCAGGGGG
GCGGAGCCTATGGAAAAACGCCAGCAACGCGCCCTTTACGGTTCTGGCCTTGCT
GGCCTTGTACATGGCTCGACAGATCT

Figure 17 (continued)

Figure 18



Oligo 1 (template) Oligo 4 (antisense primer)

Oligo 3 (sense primer) TTTTTTTT
Oligo 2 (template) AAAAAAA

